Australian Government
Department of Agriculture, Fisheries and Forestry

Guide to packaging suitability for performing QPS treatments

Version 3.0

Cataloguing data

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This publication is available at Methodologies and documents for biosecurity treatments - DAFF (agriculture.gov.au)

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Acknowledgements

The authors thank participants for their input.

Acknowledgement of Country

We acknowledge the Traditional Custodians of Australia and their continuing connection to land and sea, waters, environment and community. We pay our respects to the Traditional Custodians of the lands we live and work on, their culture, and their Elders past and present.

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Purpose

This guide provides information to assist application of and compliance with the consignment suitability requirements of the relevant treatment methodology.

Scope

This document applies to the suitability of consignments for fumigation and controlled atmosphere, where the target of treatment is within packaging. Other treatment types may have different suitability requirements.

How to use this document

This document should be read in conjunction with the relevant treatment methodology and guide.

This document is a guide only. All treatment activities must comply with the relevant import conditions, treatment requirements, and local regulations. Images used in this document are examples only and are not intended to cover all packaging types used. Assess all packaging prior to treatment to determine suitability.

Where this document refers to 'fumigant' when referring to packaging suitability, the guidance should also be considered to refer to the atmospheres and gases associated with controlled atmosphere treatments.

The technical terms used in this guide are defined in the glossary at the back of the relevant methodology. For all terms not defined in the glossary, refer to the definition used by the Macquarie Dictionary.

Packaging material photos

The commodities used in the figures throughout the document are provided only to illustrate the packaging material. Not all commodities included in the photos require, or are suitable for, treatment.

1 General Information

1.1 Consignment suitability

The fumigator-in-charge must determine if the consignment and target of fumigation is suitable for fumigation with methyl bromide. To be considered suitable, consignments must meet the requirements of section 3 Consignment Suitability of the Methyl Bromide Fumigation Methodology.

If the consignment is not suitable for fumigation, remedial action must be taken to make the consignment suitable prior to fumigation. If the consignment cannot be made suitable, the consignment must not be fumigated with methyl bromide.

1.2 Packaging material requirements

The target of fumigation must not be covered by impermeable packaging, wrapping or surface coatings that impede methyl bromide distribution.

Impermeable packaging and wrappings that impede methyl bromide distribution or impede methyl bromide penetration into the target of fumigation must be removed, opened, slashed or made pervious prior to fumigation in accordance with the specifications set out in section 3.2.3 and 3.2.4 of the Methyl Bromide Fumigation Methodology.

Pervious wrapping must be in a single layer, so the wrapping overlaying itself does not block the perforations..

If fumigant must penetrate into the target of fumigation, the target of fumigation must not be coated in materials that may impede penetration of methyl bromide into the target of fumigation (for example: lacquers, paints, waxes, natural oils, veneers, or plastic wraps).

All packaging material associated with the consignments must be fumigated in accordance with the import conditions and treatment schedule specific to the consignment.

1.3 Commercial packaging

Commercial packaging is any packing/wrapping that is applied as part of the manufacturing process. This includes presentation packaging, commercial distribution boxing and hermetic sealing done at the immediate completion of the manufacturing processes.

In some circumstances where the goods are not the target of fumigation, commercial packaging is not required to be opened, removed or slashed.

BMSB case study

When treating a consignment for Brown Marmorated Stink Bug (BMSB) the target of treatment is the packaging, not the goods themselves, so commercial packaging is NOT required to be opened, removed or slashed.

For some consignments, the goods can be treated prior to commercial packaging being applied.

Khapra beetle case study

A consignment of white rice requires mandatory treatment with methyl bromide to manage the risk of khapra beetle.

The import conditions for this consignment mandate that a declaration must be made that the treatment met one of the following three requirements:

- The goods were fumigated in gas permeable packaging.
- The goods were fumigated prior to packing.
- The impermeable packaging was open during fumigation.

Please refer back to import conditions and treatment schedules for consignment specific requirements.

1.4 Shipping packaging

Shipping packaging is any packaging/wrapping that is applied to provide protection and ensure stability of goods during shipping. This includes pallet wrapping and protective plastics applied after the completion of the manufacturing process and prior to loading.

Shipping packaging must be opened, removed, cut, slashed or otherwise adjusted to ensure distribution of heat or fumigant into areas within the treatment enclosure where pests may be present.

2 Types of Packaging

2.1 Plastic or Cellophane

Consignments wrapped in plastics or cellophane are only suitable for treatment if the wrapping is slashed or perforated in a manner which allows the fumigant to pass through freely.

Perforated plastic wraps must meet the following requirements:

- 4 holes of 6 mm diameter per 100 mm x 100 mm surface area (Figure 1, or
- 5 holes of 5 mm diameter per 100 mm x 100 mm surface area, or
- 6 pinholes per 10 mm x 10 mm surface area (Figure 2and Figure 3).

Perforated plastics must be in a single layer, or be otherwise configured, so that the holes are not blocked to ensure the fumigant can pass through.

Consignments wrapped in non-perforated plastics or cellophane including sheets, bags, pouches, and films are not suitable for treatment such as Figure 4.

Figure 1 depicts an example of suitable plastic packaging. The packaging is perforated with four holes, with a diameter larger than 6mm, per 100mm x 100 mm surface area. The positioning of the holes allows for stacking without impeding the fumigant from passing through the packaging.

Figure 1 - Suitable plastic container

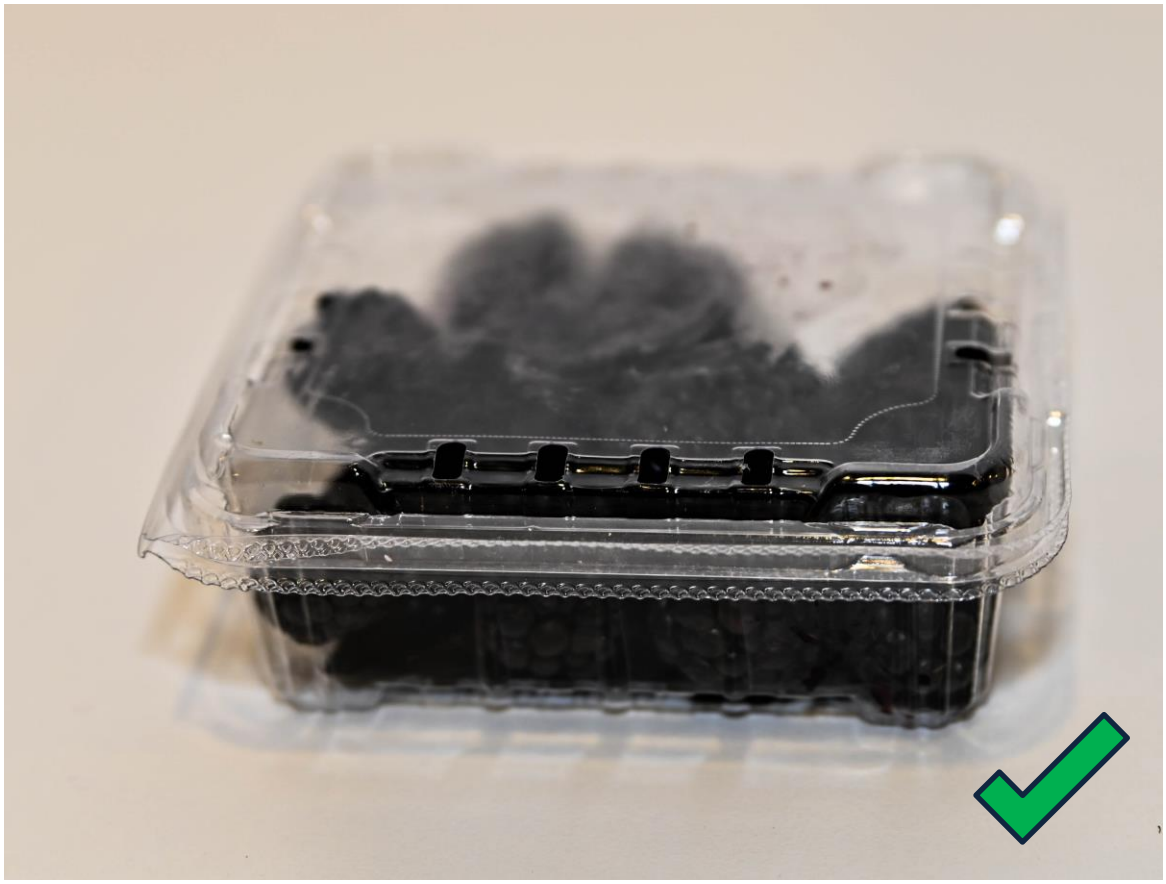


Figure 2depicts another example of suitable plastic packaging. The packaging is perforated with 6 or more pinholes for every 10 mm x 10 mm of surface area.

Figure 2 - Suitable plastic bag

Figure 3 – Close up of perforated plastic bag

Figure 4depicts an example of unsuitable plastic packaging. The packaging is sealed and has not been opened, slashed, or removed to allow the fumigant to pass through. Assuming that this consignment is not required to be fumigated prior to packaging and that the target of fumigation is the goods themselves, the packaging is unsuitable.

Figure 4 - Unsuitable plastic bag

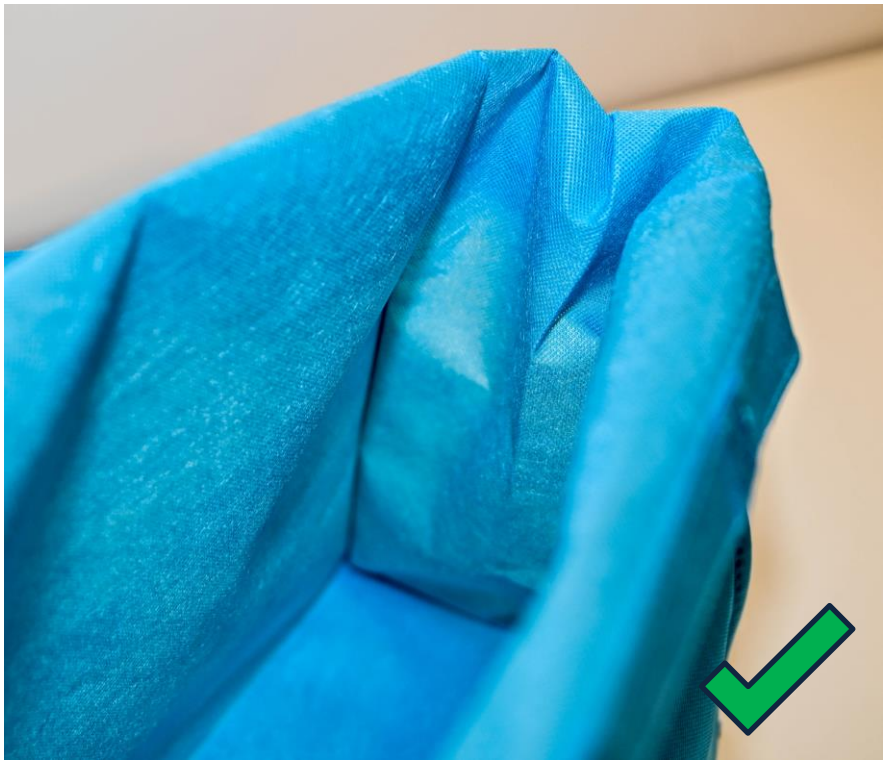
2.2 Cloth and other woven fabrics

Consignments wrapped in cloth are only suitable for treatment where the cloth is dry and porous enough to allow the fumigant to pass through freely.

Cloth or fabric which is lined or laminated with impermeable materials, such as plastic, are not suitable for treatment unless the lining can be opened, slashed, or removed.

Figure 5 - Suitable cloth bag

Figure 6 - Suitable cloth package



Cloth packaging with an impervious plastic liner is unsuitable for treatment. However, if the packaging has been opened (as in Figure 7), slashed or removed to allow the fumigant to pass through freely, it becomes suitable.

Figure 7 – Suitable (opened) lined cloth bag

Cloth packaging with an impervious foil liner is unsuitable for treatment. However, if the packaging has been opened (as in Figure 8), slashed or removed to allow the fumigant to pass through freely, it becomes suitable.

Figure 8 – Suitable (opened) cloth bag lined with foil

2.3 Woven Plastics

Consignments wrapped in woven fabrics and plastics are only suitable for treatment if the wrapping is not lined or laminated with impermeable materials, and porous enough to allow the fumigant to pass through freely.

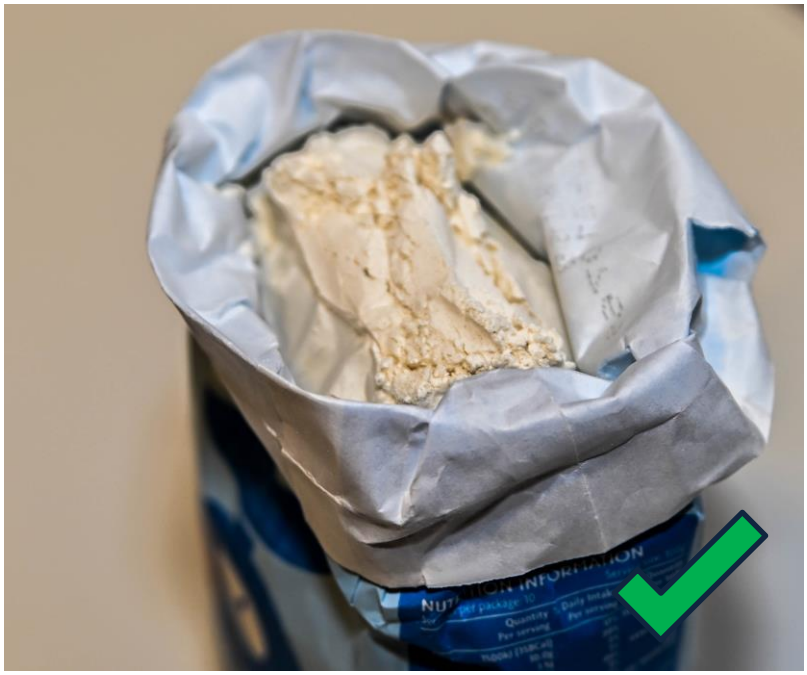
Figure 9 - Suitable woven plastic bag

Woven plastic wrapping that is lined or laminated with impermeable materials, such as plastic, are unsuitable for fumigation. This includes Biaxially Oriented Polypropylene (BOPP) bags. Check the label to ensure what kind of material a plastic woven bag is made from.

2.4 Paper and Cardboard

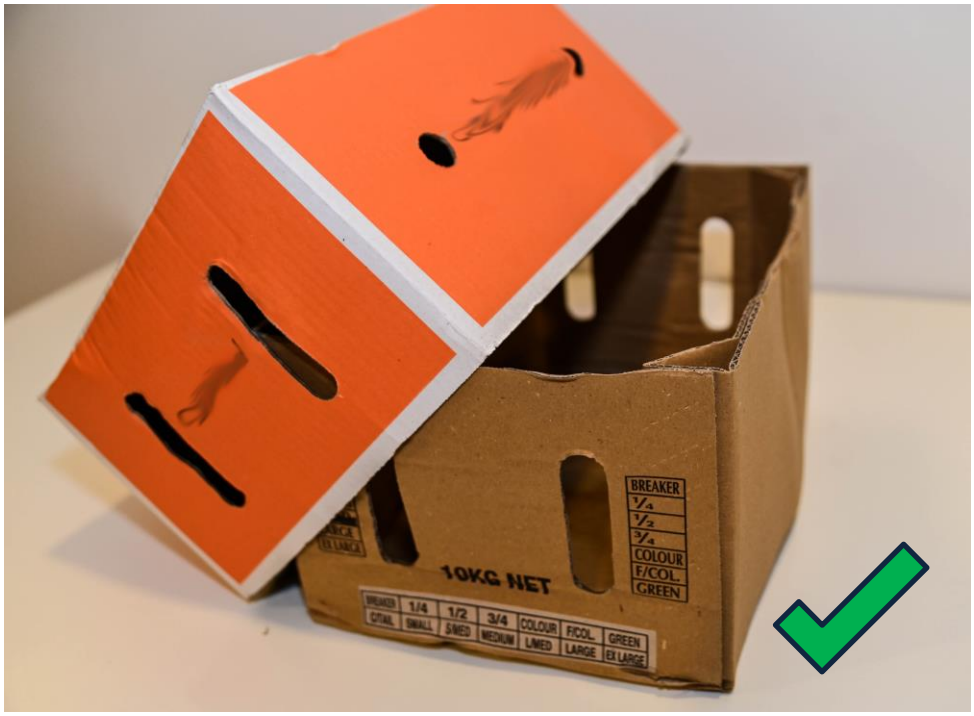
Consignments wrapped in paper and cardboard are only suitable for treatment if the wrapping is not waxed, lined, laminated, or painted.

Figure 10 - Suitable paper package



When treating perishable commodities, cardboard boxes must have ventilation holes (Figure 11), or the lid must be removed during treatment.

Figure 11 - Suitable cardboard carton



Paper packaging with an impervious foil liner is unsuitable for treatment. However, if the packaging has been opened, slashed or removed to allow the fumigant to pass through freely, it becomes suitable.

Figure 12 – Suitable (opened) lined foil paper bag

2.5 Foil and Metals

Consignments in sealed foil pouches, metal tins and or metal cans are unsuitable for treatment. However, if the packaging has been opened, slashed or removed to allow the fumigant to pass through freely, it becomes suitable.

Figure 13 - Unsuitable foil sachet

Figure 14 - Unsuitable metal can

2.6 Glass

Consignments in sealed glass jars and bottles are unsuitable for treatment. Packaging must be opened to be suitable for treatment.

Figure 15 - Unsuitable glass jar